NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

ANNUAL OPERATING PLAN

FISCAL YEAR 2001: OCTOBER 1, 2000 – SEPTEMBER 30, 2001

A great blue heron seems oblivious to the tremendous spectacle of light and sound generated by a Shuttle liftoff as the Space Shuttle *Columbia* (STS-73) soars skyward from Launch Pad 39B.

National Aeronautics and
Space Administration

INTRODUCTION

Environmental excellence is not something that can be achieved through a policy statement. Environmental excellence is a way of life and must be ingrained as part of our culture. This Annual Operating Plan (Plan) is an important step toward building environmental excellence into everything the National Aeronautics and Space Administration (NASA) does on a day-to-day basis.

The Annual Operating Plan is a management tool to implement NASA commitment to environmental excellence. In the Plan, a variety of means focus and organize the efforts of NASA toward achieving environmental excellence. The primary means to organize and focus include mission and vision statements, top ten priorities, five supporting elements, four focus areas, and the stakeholders and customers. The Plan presents a conceptual structure for meeting present environmental needs and preparing for future challenges. This conceptual structure is illustrated in Figure 1. The conceptual structure provides a context for dialogue to communicate about environmental management activities and about achieving goals.

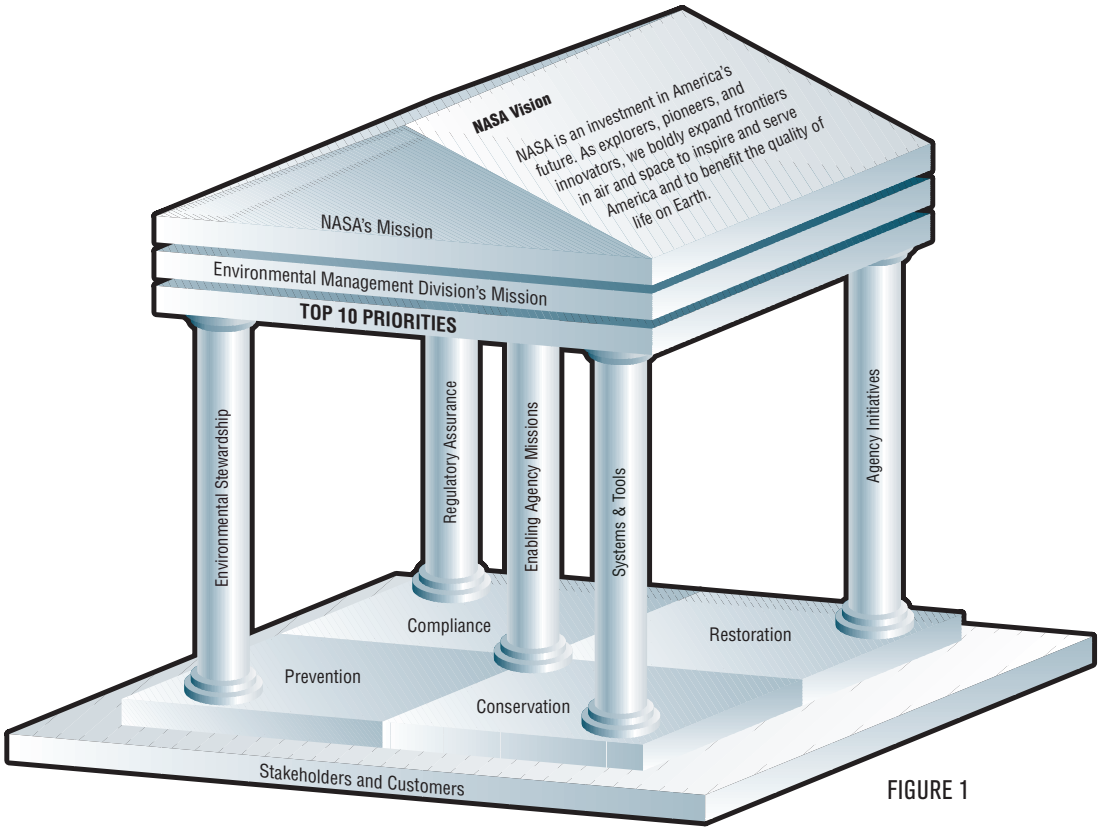


FIGURE 1

This Fiscal Year 2001 Annual Operating Plan answers the essential but implicit question posed by the Government Performance and Results Act ("Results Act") for NASA's Environmental Management Division (NASA Headquarters Code JE). That question is,

> *"Can this organization … with these resources … and through these actions, processes, and decisions … yielding these products … have these effects … for these people?"*

How this question relates to NASA's Environmental Management Division is more specifically detailed in Table 1.

TABLE 1
The Essential "Results Act" Performance Question*
*Format from the National Academy of Public Administration

	Can this organization …	… with these resources …	… and through these actions, processes, and decisions …	… yielding these products …	… have these effects …	… for these people?
Division level: Code JE	Environmental Management Division, Enterprises, Centers, Activities	Legal environmental mandates, Budget resources, Staff, Equipment, Materials & supplies, Information systems	Oversight, Planning, Management, Design, Construction, Contracting	Coordination & integration, Establishment of policies, Insight & review, Internal focal point, External liaison, Analysis & reporting, Facilitation of standards development, Facilitation of capital investment, Agencywide tools & training	Enabling NASA's mission, Minimizing environmental problems through pollution prevention, Preserving natural & cultural heritage, Complying with environmental regulations, Cleaning up environmental problems from past operations	American public, Congress Federal regulatory agencies, State & local regulatory agencies
	Organizational Input		Process	Output	Outcome	Customers

The results achieved through implementing the Fiscal Year 2000 Annual Operating Plan are presented in a document titled "Fiscal Year Achievements" (see Attachment 1).

Finally, attached to this Annual Operating Plan are two additional documents that further define NASA's Environmental Management. The documents are (1) NPD 8500.1 "NASA Environmental Management" (see Attachment 2), and (2) "NASA Environmental Excellence for the Twenty-First Century" (see Attachment 3).

I. Vision & Mission

The Environmental Management Division's mission is related to NASA's vision and mission (see Table 2). The Environmental Management Division's mission of "providing leadership and integration for NASA's Environmental Program" is consistent with NASA's vision of benefiting the "quality of life on Earth." Further, the Environmental Management Division's mission of enabling NASA's continuing leadership in "space exploration" and "aeronautics" is a direct reference to NASA's mission. Thus the Environmental Management Division's mission is linked to NASA's mission and vision.

TABLE 2
VISION AND MISSION

NASA Vision	**NASA Mission**
NASA is an investment in America's future. As explorers, pioneers, and innovators, we boldly expand frontiers in air and space to inspire and serve America and to benefit the quality of life on Earth.	*To advance and communicate scientific knowledge and understanding of Earth, the solar system, and the universe; To advance human exploration, use, and development of space; To research, develop, verify, and transfer advanced aeronautics, space, and related technologies.*

Environmental Management Division's Mission

By providing leadership and integration for NASA's Environmental Program, the Environmental Management Division enables NASA to continue as a world leader in space exploration and aeronautics while maintaining environmental safety and excellence.

II. Top 10 Environmental Priorities

NASA's Top 10 Environmental Priorities are presented in Table 3. The Top 10 Environmental Priorities are important because these are the high-visibility items requiring focused attention by NASA's executive managers. These items are identified as the Top 10 Environmental Priorities because of (1) importance to NASA's mission, (2) high costs, (3) high risks, (4) high return, or (5) their significant role in the administration of programs, finances, property, or other resources.

In general, NASA's Enterprises have found that "Top 10 Priority" lists are a useful method for informing executive managers about items of high visibility. A variety of approaches are used to identify these items; these include risk analysis (potential failure points and system anomalies) and gap analysis. The identified items are then reorganized into and narrowed to a list of 10 items through a consensus process.

The Top10 Environmental Priorities were determined through a consensus process that included representatives from NASA Centers. The first five priorities are concerned with mandatory requirements that characteristically have associated legal liabilities. The next five priorities emphasize "best management practices" that offer the agency the greatest benefits in terms of efficiency, effectiveness, and cost. By placing emphasis on achieving these 10 priorities, NASA will greatly improve its legal and management situation in the area of environmental management.

TABLE 3
TOP 10 ENVIRONMENTAL PRIORITIES

Top 10 Priorities	Remarks
1. Safely decommission and decontaminate the Plum Brook Nuclear Reactor Facility	
2. Clean up groundwater contamination at White Sands Test Facility and Jet Propulsion Laboratory	• Both locations are impacting drinking water wells, and the wells are shut down to protect the community & public
3. Bring all current operations into regulatory compliance and safely clean up contaminated sites as rapidly as possible	• Risk-based management system • Prevention, recycling, controlling & shipping (criteria from "prevention," the most effective/efficient, to "shipping," and the most expensive)
4. Enhance management visibility of environmental requirements & resource needs and implement agreed-to solutions	• Increase civil service staffing
5. Enhance programmatic and institutional National Environmental Policy Act processes	• Inspector General's Office indicated NASA's NEPA process as material weakness • Extensive re-write of program & project management –7120.5A • Extensive NEPA training at program & institutional levels • Re-write NASA's implementing NEPA regulations
6. Test and implement a NASA Environmental Management System	
7. Implement energy efficiency and water conservation programs	• Renewable energy sources • Continuous commissioning • Alternative-fueled vehicles • Green building design • Reclaimed water landscape use • Non-potable water use for irrigation & non-contact cooling • Photovoltaics • Fluorescent lighting replacement program
8. Establish pollution prevention programs	• Solid & hazardous waste minimization • Material substitution • Process re-engineering • Hazardous material reduction • Green building design • Outsourcing • Life cycle analysis, incorporating environmental values into the economic analysis
9. Assess and protect natural, cultural, and historic resources	• NASA baseline study • Develop a management program & strategy
10. Enhance recycling and affirmative procurement programs	• Divert solid waste from landfills & incineration through waste prevention, reuse, & recycling • Establish acquisition culture that favors procurement of "green" products & services

III. Functions and Work Tasks

There are five primary functions that define how environmental management responsibilities are organized and implemented. The five functions are Enabling Agency Missions, Environmental Stewardship, Regulatory Assurance, Environmental Systems and Tools, and Agency Initiatives (see Figure 2). Each function is composed of several specific work tasks. A complete listing of the work tasks for Fiscal Year 2001 and additional information (stakeholders, frequency of the task activities, and the task value to NASA) for each work task are provided in Appendix A. In addition, information about the participation in various external committees and work groups is presented in Appendix B, and the development of various mandatory periodic plans and reports is presented in Appendix C.

Enable Agency Mission: This function involves working with NASA entities and people (Enterprises, Centers, program managers and project managers) and environmental regulators to accomplish the Agency's mission in a manner that is consistent with laws and regulations. This effort requires collaboration between NASA technical experts and environmental regulators to arrive at a sound technical and environmental solution.

Environmental Stewardship: For public servants, this function incorporates the responsibility of public trust applied in general to the stewardship of the Nation's natural resources, and specifically to the stewardship of the land and its natural resources under NASA's control.

Regulatory Assurance: This function involves ensuring that NASA's operations and facilities are consistent with the framework of environmental laws, regulations, and requirements.

Environmental Systems and Tools: This function includes actions and activities which increase NASA's environmental management capacity or productivity. The function includes a wide range of actions and activities such as training, career and professional development, information technology and management, partnerships with other organizations, and teams and team building.

Agency Initiatives: This function includes special actions and activities which are deemed to be of NASA-wide importance or significance.

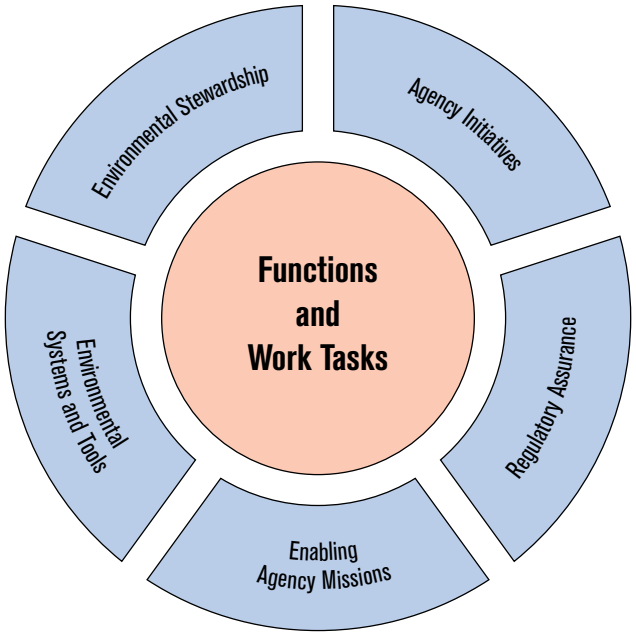


FIGURE 2

As resources (people, money, and time) are limited for implementing these tasks within a fiscal year, criteria have been identified to determine priority of these tasks. The criteria are provided in Table 4. When changes (such as political, legal, or administrative) occur within a fiscal year, the tasks may undergo re-prioritization based on the criteria.

Of the criteria, one of factor deserves special attention—the safety and health of the public and the Agency's workforce. Safety is a NASA core value that is explicitly mentioned in the NASA Strategic Plan (NASA Policy Directive (NPD) 1000.1). There are obvious benefits from incorporating safety into activities, including improving quality and reducing schedule and cost. Safety is a critical factor to everyone in prioritizing work tasks.

TABLE 4
CRITERIA TO PRIORITIZE WORK TASKS

- Safety and Health of the Public and the NASA Workforce
- Mission-Critical Support
- Environmental Effectiveness and Efficiency
- Regulatory Requirements
- Resource Savings
- Customer Demand
- Time-Sensitive Issues

IV. Four Focus Areas of Environmental Needs

The full spectrum of environmental needs can be expressed in the following four focus areas: prevention, conservation, compliance, and restoration. These focus areas, when viewed in the simplest terms, can be expressed as minimizing future problems through an active pollution prevention program; preserving our rich natural and cultural heritage for future generations; bringing all operations into compliance with current environmental requirements; and cleaning up all problems resulting from past operations. A more detailed description of the four areas of environmental needs is given in Table 5.

TABLE 5
FOUR FOCUS AREAS OF ENVIRONMENTAL NEEDS

PREVENTION This area focuses on using a holistic approach to pollution prevention to instill an environmental ethic that will avoid future compliance and restoration problems. This requires strengthening of the National Environmental Policy Act (NEPA) planning process, modifying industrial processes, and developing substitute materials. Since there may be slightly higher initial costs, final decisions will be based on project life-cycle costs while NASA seeks the most environmentally benign solutions.	**CONSERVATION** Conservation is the essence of good stewardship for all of the resources NASA controls. It extends to carefully planning land use, enhancing existing natural resources, and preserving those cultural resources associated with significant aspects of our historic and prehistoric heritage. Conservation reduces the impact of our activities on the environment, especially through programs such as recycling and energy conservation.
COMPLIANCE This focus area addresses all activities, ensuring that NASA's current and future operations meet all Federal, State, or local environmental regulations. Compliance will be the highest-priority item in the entire NASA environmental strategy. Since total compliance is a fast-moving target, we will be proactive in monitoring changing requirements. We will strive to be in compliance with all new requirements in advance of the regulatory date to further demonstrate our commitment to the environment.	**RESTORATION** This focus area stresses cleaning up all contaminated sites as rapidly as possible to protect human health and the environment. Funds availability and technical limitations require that this effort be carried out in a prioritized sequence. The priority system must be clear and easily understood to permit NASA managers to make funding decisions and communicate the basis for decisions on which sites to clean up first. The Agency will actively seek public involvement in the decisionmaking process.

The relationship of the "Four Focus Areas of Environmental Needs" to the "Top 10 Environmental Priorities" is provided in Table 6.

TABLE 6
FOUR FOCUS AREAS AND TOP 10 ENVIRONMENTAL PRIORITIES

Top 10 Environmental Priorities	Four Focus Areas			
	Prevention	Conservation	Compliance	Restoration
1. Safely decommission and decontaminate the Plum Brook Nuclear Reactor Facility				X
2. Clean up groundwater contamination at White Sands Test Facility and Jet Propulsion Laboratory				X
3. Bring all current operations into regulatory compliance and safely clean up contaminated sites as rapidly as possible			X	X
4. Enhance management visibility of environmental requirements & resource needs and implement agreed-to solutions	X		X	
5. Enhance programmatic and institutional National Environmental Policy Act processes	X			
6. Test and implement a NASA Environmental Management System	X			
7. Implement energy efficiency and water conservation programs		X		
8. Establish pollution prevention programs	X			
9. Assess and protect natural, cultural, and historic resources		X		
10. Enhance recycling and affirmative procurement programs		X		

V. Stakeholders and Customers

Two key elements in environmental management are stakeholders and customers. "Stakeholders," "external customers," and "internal customers" are defined in Table 7. Stakeholders and customers play an important role in environmental management.

Stakeholders are critical to making and implementing sound, cost-effective, and informed environmental management decisions. Research literature shows that decisions made in collaboration with stakeholders are more effective and durable. Collaborating with stakeholders provides an opportunity for understanding each party's values and perceptions. This understanding facilitates the exchange of information and ideas that enables parties to make informed decisions. Collaboration does not mean consensus, but stakeholders are more likely to accept a decision they have participated in shaping. (Modified from The Presidential/Congressional Commission on Risk Assessment and Risk Management (1997) *Framework for Environmental Health Risk Management.*)

Customers are the end users and can either be internal or external to NASA. Customers are interested in an organization's ability to provide quality goods and services, to deliver goods and services in a timely and cost-effective manner, to provide customer service, and to satisfy the customer needs. Where public funds are being spent, governmental workers and their agencies are accountable to the public as their customers. Further, governmental workers and their agencies have stewardship and fiduciary responsibilities that involve the public trust. (Modified from Procurement Executives' Association (199x) *Guide to a Balanced Scorecard Performance Management Methodology.*)

TABLE 7

STAKEHOLDERS, EXTERNAL CUSTOMERS, AND INTERNAL CUSTOMERS

Term	Definition	NASA Environmental Management Division List
Stakeholders	Stakeholders are persons who are concerned about or affected by a decision.*	• American public • Congress • Local communities • States • Tribes • Business community • Council on Environmental Quality • Department of Energy • Environmental Protection Agency • Federal Environmental Executive • General Accounting Office • Office of Federal Procurement Policy • Office of Management and Budget • Other Government Departments and Agencies
External Customers	External customers are persons who use or are directly affected by the organization's products or services– those for whom the organization is in business.**	
Internal Customers	Internal customers are employees within the organization who receive goods and services produced elsewhere in the organization and act upon them in the production chain, ultimately leading to the organization's final output of goods and services.**	• NASA Administrator • NASA Strategic Enterprises • NASA Centers • NASA Headquarters Functional Offices • NASA Headquarters Code J • NASA Inspector General

* The Presidential/ Congressional Commission on Risk Assessment and Risk Management (1997) *Framework for Environmental Health Risk Management.*

** U.S. Office of Personnel Management (1999) *The President's Quality Award Program.*

VI. Continual Improvement: Environmental Management System

An Environmental Management System (EMS) is "that part of the overall management system which includes organizational structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and maintaining the environmental policy" (International Organization for Standardization).

NASA's environmental management system is cycle composed of five major elements: Policy, Planning, Implementation and Operation, Checking and Corrective Action, and Management Review (see Figure 3). Figure 4 provides a better illustration when the dimension of time is considered. Further details on these five elements are presented in Table 8.

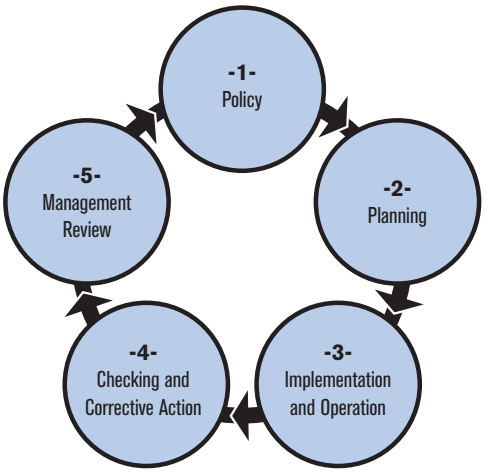


FIGURE 3

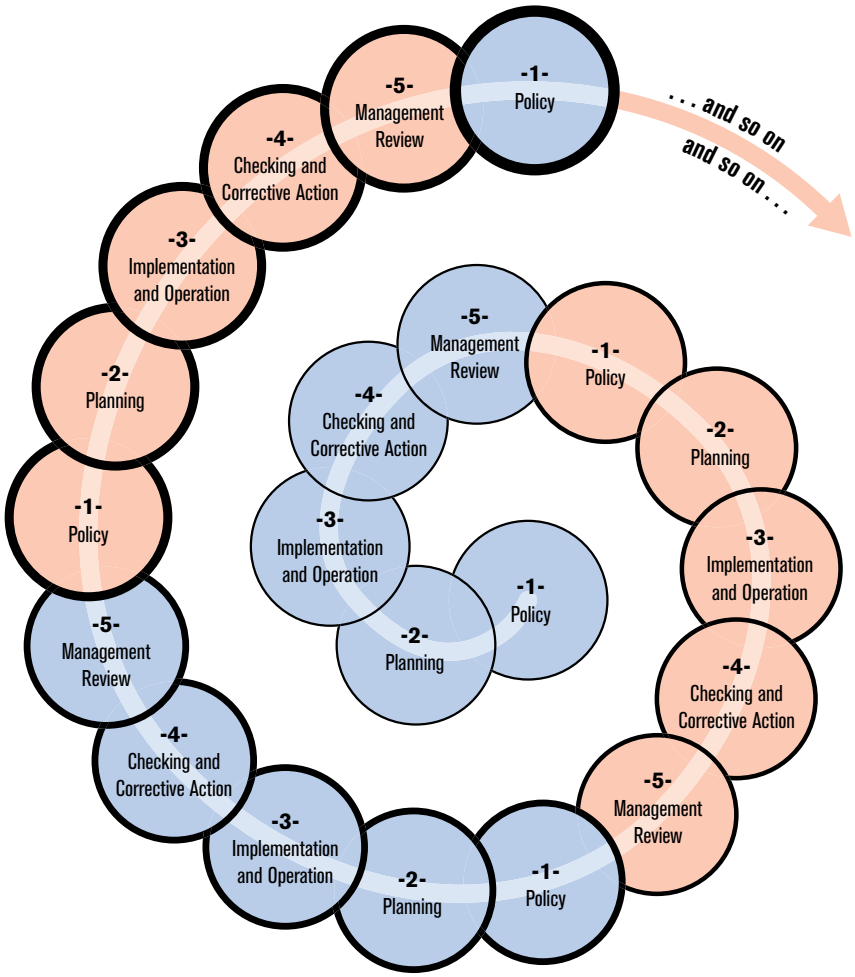


FIGURE 4

TABLE 8
ENVIRONMENTAL MANAGEMENT SYSTEM (EMS): Elements

Elements	Description	NASA Environmental Management Division's Related Activities
1. Policy	Top management needs to clearly define the organization's environmental policy. It must provide a framework for setting and reviewing goals.	• Establish & maintain NASA's Environmental Management policy directive
2. Planning	Identify environmental "aspects" of activities the organization controls (the interaction with the environment) and understand how those aspects impact the environment. Goals and objectives can be set to reduce the identified impacts, and managerial programs and strategies can be developed for achieving them.	• Establish the Agency list of environmental aspects • Establish NASA's Environmental Management priority impact risk criteria • Evaluate Federal & State statutes, regulations, and executive orders that might apply to NASA locations • Regularly update information on Federal & State statutes, regulations, and executive orders • Ensure that legal requirements information is communicated in a timely manner to the appropriate NASA installation • Evaluate NASA-wide agreements and commitments • Establish & maintain NASA Environmental Policy and Guidelines
3. Implementation & Operation	Define roles and responsibilities, developing programs for training and awareness, establishing communications networks inside and outside the organization, maintaining documents and records, and planning for operational control and emergency response.	• Establish the basic framework and structure of the EMS • Periodically assess, review, and report on the condition of the EMS • Seek continual improvement opportunities for the EMS • Determine EMS training needs • Conduct training as required at each relevant level and function of the organization • Verify & record that the necessary EMS training has occurred • Define & maintain the EMS Procedures Manual
4. Checking & Corrective Action	Measure performance against goals, objectives, and compliance with laws and requirements; develop corrective measures for non-conformance.	• Establish oversight & evaluation of installation operations through functional assessments, EMS audits, performance metrics, or other means • Provide functional oversight and conduct functional assessments • Establish & maintain programs and procedures for functional assessments
5. Management Review	Top management must review the system and address needed changes.	• Report to the Capital Investment Council on the results of the functional assessments and on the status and viability of the EMS • Establish & document management review

TABLE 9

FOCUS AREAS, GOALS AND OBJECTIVES

Focus Areas (or Functional Mission)	Goals (or Core Activities)	Objectives: Short-Term	Objectives: Long-Term
PREVENTION: Implement an integrated approach to minimize environmental contamination and pollution	1. Incorporate Pollution Prevention considerations in all Agency decisions 2. Develop visibility for implementing pollution prevention	• Incorporate environmental values into economic analyses & process re-engineering as an integral part of the Program & Project Management process • Establish partnerships with public & private groups to promote sharing of technical resources • Integrate NEPA requirements into Program & Project Management system • Develop an Environmental Management System • Establish pollution prevention partnerships	• Instill a pollution prevention ethic throughout NASA through training & awareness programs • Reduce or eliminate hazardous & toxic materials in operations & processes • Pursue new technologies using environmentally benign substances and processes
CONSERVATION: Protect and enhance natural and cultural resources	1. Assess and protect natural, cultural, & historic resources 2. Enhance recycling programs 3. Enhance energy & water conservation	• Obtain natural, cultural, & historic resources baseline data • Establish partnerships with Federal & State agencies and others to manage cultural, natural, & historical resources • Divert solid waste from landfills & incineration through waste prevention, reuse, & recycling • Reduce energy & water usage • Develop an energy efficiency plan that incorporates the principles of sustainable design & continuous commissioning • Advocate for water conservation programs that include the use of reclaimed water for landscaping and non-potable water for irrigation & non-contact cooling	• Develop a strategy to better manage NASA's natural, cultural, & historical resources • Incorporate natural, cultural, & historical resource considerations & constraints into land-use planning & into Agency programs • Establish an acquisition culture that favors items made of recycled materials & embraces "green" products & services • Establish an energy-efficiency culture that embraces the use of renewable energy sources
COMPLIANCE: Ensure that all operations meet and maintain compliance with environmental laws and regulations	1. Bring all current operations into compliance 2. Enhance management visibility 3. Develop and implement a compliance monitoring program	• Identify areas of non-compliance & develop a tracking system • Build and adequately staff at the Centers an organization to manage compliance • Establish a risk-based priority system for all compliance actions • Implement compliance activities & projects utilizing the preference principle of 1st, prevention; 2nd, recycling; 3rd, control; 4th, ship waste to an approved location • Identify management indicators that accurately measure achievement of environmental results • Provide policy direction for the environmental program • Identify and validate environmental funding and personnel requirements • Conduct comprehensive compliance reviews • Partner with EPA & the regulatory community to resolve problems • Monitor pending environmental regulations for advance planning & to be proactive	• Develop management information systems
RESTORATION: Clean up contaminated sites	1. Clean up contaminated sites as rapidly as funds permit 2. Establish and maintain a positive reputation with regulators and the public	• Identify & prioritize all sites • Initiate removal actions • Allocate resources based on human health & environmental risks • Aggressively defend resource requirements • Seek innovative cleanup strategies • Negotiate Federal Facilities Agreements and consent agreements with EPA & States • Work closely with regulators & jointly seek solutions	• Utilize community awareness and outreach programs and involve local communities

VII. Goals and Performance Measures

One of the most important aspects of the Annual Operating Plan is identifying clearly the goals, objectives, and performance measures. Goals and objectives are important in enabling the entire organization to apply scarce resources (people, time, and money) toward their achievement. Performance measures are important in determining progress and success toward achievement of objectives and goals.

The Environmental Management Division's goals and objectives are directly related to the four Focus Areas. It is noteworthy that some of the goals and objectives have changed this fiscal year. The goals and their objectives (short-term and long-term) are stated in Table 9 (see opposite page).

The Environmental Management Division's performance measures have been updated to reflect changes in policies and procedures. The new performance measures for each of the goals are provided in Table 10.

TABLE 10
FOCUS AREAS AND PERFORMANCE MEASURES

Focus Areas or Functional Mission	Performance Measures	Remarks: Source of Requirement
PREVENTION: Implement an integrated approach to minimize environmental contamination and pollution	Toxic release inventory: Achieve an Agency 40% reduction of toxic chemical releases and transfers by 2007 from the 2000 calendar year baseline.	Executive Order
CONSERVATION: Protect and enhance natural and cultural resources	Energy: Achieve a 35% reduction in energy usage per square foot of building by the year 2010 from the 1985 baseline.	Executive Order
COMPLIANCE: Ensure that all operations meet and maintain compliance with environmental laws and regulations	Noncompliance & releases: Achieve a 5% reduction in Agency environmental noncompliance incidents and releases by FY 2005 using FY 2000 as a baseline.	"Results Act"
RESTORATION: Clean up contaminated sites	Unfunded liability: Reduce the Agency's unfunded environmental liability through a long-term strategy annually investing an amount of not less than 3-5% of the Agency's environmental liability in environmental compliance and restoration (ERC) funding.	"Results Act"
OTHER: Customer service	Customer survey: Achieve an aggregate composite score of 4.5 on the scale of 5.0 by 2003.	General Accounting Office report suggestion

VIII. Linking the Annual Operating Plan to the Functional Leadership Plan

This section addresses the relationship of Environmental Management Division's Annual Operating Plan to the Office of Management Systems' (OMS) Functional Leadership Plan.

The Functional Office is the next NASA organizational level above the Division level. Functional Office activities fall into three major categories: functional leadership, staff to the Administrator, and central services. Table 11 is an overview of NASA's Functional Office roles and responsibilities.

TABLE 11
FUNCTIONAL OFFICE ROLES & RESPONSIBILITIES*
*From NPG 1000.2 *NASA Strategic Management Handbook* (February 2000)

	Functional Leadership	Staff to the Administrator	Central Services
Intent	• Efficiency • Effective support to Agency mission	• Provide Cross-Enterprises balance & synergy • Ensure consistent message to external customers • Ensure statutory compliance & accountability	• Efficiency
Products	• Policy standards • Budget guidance • Functional leadership plans, assessments, & reports improvements • Standards & architecture • Training	• Recommendations • Assessments & reports • Communiques • Functional initiatives	• Discrete service • Enterprise staff support
Customer	• Enterprises & Centers	• Administrator	• Enterprises & Centers
Principal Activities	• Coordination & integration • Establishing policies • Insight & review • Internal focal point • External liaison • Analysis & reporting • Facilitating standards development • Facilitating capital investment	• Coordination & planning • External liaison • Analysis & reporting • Independent assessment • Functional initiative sponsorship & direction	• Requirements determination & consolidation • Assessment • Support
Mode of Operation	• Value-added policy & standards • Extensive involvement of customers & stakeholders, including Enterprises & Centers	• Independent reporting to Administrator, coordinated with Enterprises as appropriate	• Customer responsiveness • Collocated (staff only) • Negotiating Implementation Plans • Negotiating Performance Plans

More specifically, OMS is a Functional Office, and the next hierarchical level above Environmental Management Division. OMS is the next hierarchical organization level above the Environmental Management Division. The OMS mission is to do the following:

1. **Provide functional leadership:** support NASA mission success by fostering processes to optimize safety, effectiveness, and efficiency in meeting Government requirements.

2. **Leverage resources:** introduce new techniques and technologies that increase the return on the investment of limited resources.

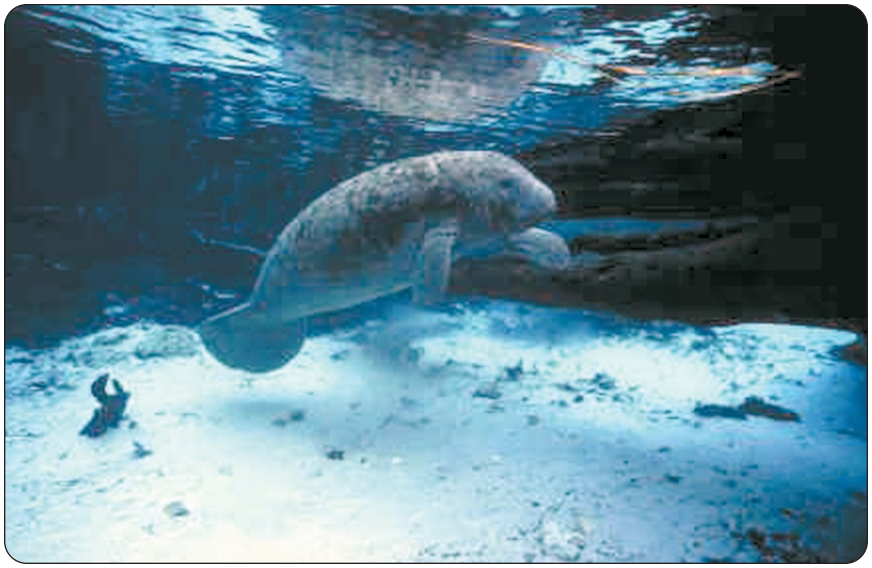
3. **Assess functional performance:** enable senior managers to make informed decisions, reduce risks, and achieve the highest level of safety and security.

The goals in the Annual Operating Plan are linked to OMS's mission stated in the Functional Leadership Plan, and this linkage is shown in Table 12.

TABLE 12

RELATIONSHIP BEWTEEN ENVIRONMENTAL MANAGEMENT DIVISION (EMD: Code JE) GOALS AND OFFICE OF MANAGEMENT SYSTEMS (OMS: Code J) MISSION

Focus Area (EMD: Code JE)	Goal (EMD: Code JE)	Mission (OMS: Code J)		
		#1 Provide Functional Leadership	#2 Leverage Resources	#3 Assess Functional Performance
Prevention	1. Incorporate pollution prevention considerations in all Agency decisions	X		
	2. Develop visibility for implementing pollution prevention	X		
Conservation	1. Assess and protect natural resources		X	
	2. Enhance recycling and energy conservation programs		X	
Compliance	1. Bring all current operations into compliance			X
	2. Enhance management visibility	X		
	3. Develop and implement a compliance monitoring program			X
Restoration	1. Clean up contaminated sites as rapidly as funds permit		X	
	2. Establish and maintain a positive reputation with regulators and the public	X		
Other: Customer Service	Conduct an annual customer satisfaction survey to measure performance in a number of critical areas			X



APPENDICES

A. Functions and Work Tasks–Stakeholders, Frequency, Value to NASA

I. Enabling NASA Missions	Priority	Stakeholder
Ames Development Plan/EIS	Mandatory	Enterprise
Vandenberg/Cape Canaveral Launch EA	Mandatory	Enterprise
Keck Outrigger Historic/NEPA Compliance	Mandatory	Enterprise
Mars Program Scoping	Mandatory	Enterprise
Congressional Activities	Mandatory	Administrator
Regulatory Waivers and Exemptions Coordination	Mandatory	Enterprises
Represent Agency at Interagency and Intergovernmental Meetings	Mandatory	Administrator
Shuttle Environmental Assurance Coordination	High Priority	Enterprise/Centers
NESHAP's Regulatory Review & Interface	High Priority	Enterprises/Centers
Downey Transfer	High Priority	Centers
External Coordination For Federal and Private (44 Groups)	High Priority	Enterprise
Congressional Monitoring (partnering with L)	Functional	Enterprise/Centers

II. Stewardship	Priority	Stakeholder
Native American Consultation Procedure	Mandatory	Administrator
Sustainable Design for the Environment	Mandatory	Administrator
Agency Program Operation Plan (POP) Support	Mandatory	Administrator
ECR Program Validation & Prioritization	Mandatory	Administrator
WSTF & JPL Cleanup Groundwater Contamination	Mandatory	American Public
Code J Implementation Plan	Mandatory	Administrator
Code JE Annual Operating Plan	Mandatory	Administrator
Code JE Metrics	Mandatory	Administrator
National Election Transition Plan for Environmental	Mandatory	Administrator
Global Climate Change Coordintation	High Priority	Administrator
Super-ESPC/Free Savings Support	High Priority	Centers
Occupational Health & Safety Coordination	High Priority	Functinal Staff Offices
Cultural Resources Baseline	High Priority	HQ/Code J
Natural Resources Baseline	High Priority	American Public
Advocate Center Requirements	High Priority	Centers
Consultation to Center Counterparts	High Priority	Centers
Customer/Stakeholder Briefings	High Priority	AP, Adminis, Entps
Intra-Agency Energy/Environmental Coordination	High Priority	Administrator
JPL NMO Superfund Support	High Priority	Centers
Chesapeake Bay Program	High Priority	American Public

Continuous Commissioning	Functional	Enterprises
Biodiversity Program	Functional	American Public

III. Regulatory Assurance	**Priority**	**Stakeholder**
EPA and DOE Coordination	Mandatory	Administrator
Freedom of Information Act	Mandatory	HQ Code L
Regulation Review	Mandatory	Administrator
Environmental Functional Reviews	Mandatory	Administrator
Energy Functional Reviews	Mandatory	Administrator
ECR Program Management	Mandatory	Centers/Enterprises
Annual Energy Implementation Plan	Mandatory	
External Reports (JE Generated)		
Internal Reports (Support to Other Codes: A, B, L, Z . . .)		
NEPA EA/EIS	Mandatory	Enterprises
NEPA Regulation Rewrite	Mandatory	Administrator
Plum Brook Decommissioning	Mandatory	American Public
EO 13148 Manifest and Implementation Plan	Functional	Centers
Water Conservation: New Rules Coordination & Implementation	Mandatory	Enterprises
EO 13101 Greening the Government Through Waste, Prevention, Recycling and Federal Acquistion	Mandatory	Agency
EO 13123 Greening the Government Through Efficient Energy Management	Mandatory	Agency
EO 13148 Greening the Government Through Leadership in Environmental Management	Mandatory	Agency

IV. Environmental Systems and Tools	**Priority**	**Stakeholder**
Environmental Management Studies	High Priority	Administrator/Enterprises
"Dirty1/2 Dozen" (Affirmative Procurement Items)	High Priority	Code H
Environmental Management Board	Mandatory	NASA Administrator
Code JE Budget Management	Mandatory	Agency
Environmental Contracts Management	High Priority	HQ/Code J
P2 NPG's Creation and Maintenance	Mandatory	Centers
Energy Efficiency Board	Mandatory	NASA Administrator
Code J "Synergy" Activities	Funtional	Code J
Environmental Conference (Biannual)	High Priority	Centers
Root-cause Analysis	Functional	Administrator
Environmental Alternative Dispute Resoultion Support	High Priority	Agency
Agency Environmental/Energy Awards Program	High Priority	Agency
Organization Documents/Records Management	Mandatory	Agency
Training Agencywide Environmental and Energy Training Initiatives	High Priority	Administrator
Training Competency-based Environmental Training Program	High Priority	Administrator

Web-page Revitalization and Maintenance	Functional	Agency
Environmental Database Management and Analysis:	Mandatory	Administrator
Sites; FEDPLAN; CTC; NETS; ECRS; GIS		
Principal Centers:	High Priority	Enterprises
AP2; NESHAP's; GIS; NETS; Recycling		
External MOA/MOU Coordination	High Priority	Enterprises
Advisory Council, AFCEE, ATSDR, DOE, DOD, DOT, GSA, Navy, NOAA		
Environmental Management Systems Initiative Implementation	High Priority	Administrator

V. Agency Initiatives	**Priority**	**Stakeholder**
Asset Management	Mandatory	Code B
ISO 9001	Mandatory	NASA Administrator
NASA Strategic Plan/Handbook	Mandatory	NASA Administrator
ADP Support	Mandatory	HQ/Code J
Code J Synergy Activities	Mandatory	HQ/Code J
DSR's	Mandatory	HQ/Code J
Action Items/Special Tasks	High Priority	HQ/Code J
Code J Customer Survey Support	High Priority	HQ/Code J
FAIR Act and Report	Mandatory	

B. Reports, Plans, and Databases

Reports—JE-Generated	Priority	Stakeholder	Frequency	Value to NASA
Advisory Council on Historic Preservation Reports to Congress	Mandatory	Administrator	Irregular	Fulfill regulatory requirement
Biennial Hazardous Waste Report	Mandatory	Administrator	Biennial	Fulfill regulatory requirement
DOE Energy & Water Report	Mandatory	Administrator	Annual	Fulfill regulatory requirement
Energy Budget Exhibit—OMB A-11, Exhibit 55 (Code B)	Mandatory	Administrator	Annual	Fulfill regulatory requirement
Environmental Budget Exhibit to OMB (Code B)	Mandatory	Administrator	Annual	Fulfill regulatory requirement
Environmental Justice Report	Mandatory	Administrator	Annual	Fulfill regulatory requirement
EO 13123 Scorecard	Mandatory	Administrator	Annual	Fulfill regulatory requirement
EO 13148 Annual Summary Report	Mandatory	Administrator	Annual	Fulfill regulatory requirement
Federal Archeological Report to Congress	Mandatory	Administrator	Annual	Fulfill regulatory requirement
GPRA Metrics (Code B)	Mandatory	Administrator	Annual	Fulfill regulatory requirement
Mixed Waste Report	Mandatory	Code B	Annual	Fulfill regulatory requirement
RCRA 6002/Recycling Report	Mandatory	Administrator	Annual	Fulfill regulatory requirement
Section 18 Endangered Species Cost Report to Congress	Mandatory	Administrator	Annual	Fulfill regulatory requirement
State of the Environment Report (CEQ) to Congress	Mandatory	Administrator	Annual	Fulfill regulatory requirement
Superfund Report	Mandatory	Administrator	Annual	Fulfill regulatory requirement
Threats to NASA National Historic Landmarks	Mandatory	Administrator	Irregular	Fulfill regulatory requirement
Threats to NASA National Natural Landmarks	Mandatory	Administrator	Irregular	Fulfill regulatory requirement
Reports—Support to Other Codes				
Accountability Report to the President (Code B)	Mandatory	Administrator	Annual	Fulfill regulatory requirement
EO 13149 Annual Report (Code JG)	Mandatory	Administrator	Annual	Fulfill regulatory requirement
Plans—JE-Generated				
EO 13123 Implementation Plan	Mandatory	Administrator	Annual	Fulfill regulatory requirement
EO 13148 Manifest and Implementation Plan	Mandatory	Administrator	One-time	Fulfill regulatory requirement
Plans—Support to Other Codes				
EO 13149 Agency Implementation Strategy (Code JG)	Mandatory	Administrator	One-time	Fulfill regulatory requirement
Automated Systems/Databases				
Sites Inventory Database	Mandatory	HQ Code B	Continuous	Fulfill regulatory requirement
NASA Environmental Tracking System (NETS)	High Priority	HQ Code J	Continuous	Increased efficiency; improved accountability & management
Environmental Geographics Information System (GIS)	Functional	Centers/HQ Code J	Continuous	Compliance Awareness
Environmental Compliance & Restoration System (ECRS)	Functional	Enterprises/Centers	Continuous	Efficiency and cost savings

C. External Committees and Working Groups (Meetings)

Title	Priority*	Stakeholder**	Frequency	Value to NASA
Biodiversity Symposium Series (Code Y)	Functional	American Public	Semi-Annually	Represent Code JE for biodiversity techniques
CAA Services Steering Committee	Functional	Enterprises, Centers	Bimonthly	Partnering with other Federal Agencies
CADD GIS Executive Working Group	High Priority	Enterprises	Semi-Annually	Represent Code JE in Interagency for GIS Standardization
CEQ NEPA Liaison High Priority	Admin, Enterp, Centers, J		Bimonthly	Exchange of information, awareness
CERL TEAM Committee—Functional Assessments	High Priority	Admin, Enterp, Centers, J	Annual	Decisionmaking body for env compl protocols
Chesapeake Bay Program Federal Agencies Committee	High Priority	American Public	Bimonthly	Represent Agency in Regional CBP Effort
Civilian Federal Agencies Task Force on Env Compliance	Functional	Centers	Monthly	Partnering with other Federal Agencies
Climate Change	High Priority	Admin, Enterp, Centers	Occassional	Represent Agency in Federal policy development, information
Cost Engineering Group	Functional	Admin, Enterp, Centers, J	Occassional	Exchange of information, cost info sharing
DAR FAR Environmental Subcommittee	Mandatory	Enterprises, Centers	Monthly	Agency interests in Federal policy/regulation development
DOE FEMP Restructuring Subcommittee	Functional	Enterprises, Centers	Bimonthly	Cost Savings
DOE FEMP Utility Working Group	Functional	Enterprises, Centers	Quarterly	Cost savings
DOE FEMP Water Working Group	Functional	Enterprises, Centers	Quarterly	Cost savings; enhanced compliance
Energy Efficiency Board	Mandatory	Administrator	Semi-Annually	Policy, cost savings
Environmental Management Board	Mandatory	Administrator	Quarterly	Policy, budget
Environmental/Energy Conference	High Priority	Centers	Biannual	Information Exchange, awareness
EO 13101—Interagency Group	High Priority	Administrator	Monthly	Agency interests in Federal policy development
EO 13148—EMS Subcommittee Workgroup	High Priority	Admin, Enterp, Centers, J	Monthly	Ensure implement policies; meet NASA needs
EO 13148—Interagency Priority Chemical Working Group	High Priority	Administrator	Monthly	Represent Agency interests in Federal implementation strategies
EO 13148—NASA Working Group	High Priority	Administrator	Monthly	Lead Agency in EO 13148 implementation strategies
EO 13148—Steering Committee	Mandatory	Administrator	Monthly	Agency interests in Federal policy development
EPA & Federal Agencies Roundtable	Functional	Admin, Enterp, Centers, J	Monthly	Exchange of information
Federal Energy Management Task Force	Mandatory	Administrator	Quarterly	Agency interests in Federal policy development
Federal Environmental Executive (FEE)	Mandatory	Administrator	Semi-Annual	Agency interests in Federal policy development

Federal Facility Council Committee on Procurement & Contracting	High Priority	Enterprises, Centers	Monthly	Federal Agency Coordination and Partnerships
Federal Native Plant Conservation Initiative	Functional	Enterprises	Bimonthly	Federal Agency Partnership/information
Federal Preservation Officers	High Priority	Admin, Enterp, Centers, J	Occassional	Represent Agency in Federal policy development, information
Federal Remediation Technologies Roundtable	Functional	Enterprises, Centers	Biannual	Sharing technology/partnering with Federal Agencies
Inter-Agency Perchlorate Steering Committee	High Priority	Admin, Enterp, Centers, J	As required	Standards based on science, sharing technology
IWG on Dioxin	Functional	Admin, Enterp, Centers, J	As required	Represent Agency in Federal policy development
JANNAF Safety & Environm Protection Subcommitee	Functional	Admin, Enterp, Centers, J	Annual	Forum to ensure issues addressed in propulsion systems
JASPPA Meetings & JG-PP Quarterly	Functional	Admin, Centers, J	Bimonthly	Partnering w/Fed Agencies & Industry—cost leveraging
Joint Group on Pollution Prevention—Principals Meeting	Mandatory	Enterprises/Centers	Biannual	Policy development and partnering with DoD—cost leveraging
JPL Monthly Mgmt Review Meeting	High Priority	Enterprises/Centers	Monthly	Saving time and cost; improving environmetnal compliance
NASA Emergency Preparedness Coordinators	Functional	Administrator	Annual	Environmental input on disaster recovery
NASA GIS Working Group	High Priority	Enterprises	Semi-Annually	Assist in developing Institutional GIS for NASA Centers
NASA MARS Internal Working Group	High Priority	Administrator	Bimonthly	Saving time and cost; improving environmetnal compliance
NASA Occupational Health Managers Meeting (AM)	Functional	Enterprises	Annual	NASA Environmental Health & Safety coordination
NASA Safety Managers Meeting (QS)	Functional	Enterprises	Biannual	NASA Environmental Health & Safety coordination
NRC/Federal Facilities Standing Committee on Environ Engineering	Functional	Centers	Quarterly	Partnering with other Federal Agencies
OMB Senior Energy Officials	Mandatory	Administrator	Semi-Annual	Represent Agency interests in Federal policy development
Planet GSA Meetings	Functional	Administrator	Bimonthly	Agency Envir Executive meeting
Pollution Prevention National Roundtable	Funtional	Centers	Semi-Annually	Partnering with other Federal Agencies and private sector
Shuttle Environmental Assurance	High Priority	Enterprises/Centers	Bimonthly	Partnering with Federal Agencies
You Have the Power Agency Coordinators	Functional	Enterprise, Centers	Quarterly	Cost savings; positive recognition; increased awareness

*** Mandatory, High Priority, or Functional**

**** Administrator, Enterprises, Center, Code, or American Public**

ATTACHMENTS

FISCAL YEAR 2000 ACCOMPLISHEMENTS		
ACCOMPLISHMENT SUBJECT AREA	**ACTION**	**RESULTS**
ENABLE AGENCY MISSION		
Keck Observatory	Negotiated a plan for mitigating adverse effects and accommodating use without compromising NASA's mission.	Implementation of the plan will result in a MOA among NASA, Hawaii State Historic Preservation Officer, and the Advisory Council on Historic Preservation as part of the transfer agreements.
Mars Exploration Mission	Developed a plan for completing the NEPA review of phases for the 10-year Mars Exploration Mission.	The plan identified staffing and other potential institutional needs.
ENVIRONMENTAL STEWARDSHIP		
Biodiversity Program	Initiated an Agencywide biodiversity program, and coordinated NASA's Biodiversity Program with NASA Centers, EPA, DOD, DOI and the private sector.	This Program will increase scientific understanding of ecosystems, sensitivity to stewardship responsibilities, opportunities for biotic resources in abating contamination, and Federal agencies' willingness to leverage scarce resources and preserve natural assets.
Memorandum of Understanding & Agreement (MOU&A) with General Services Administration (GSA)	Completed a MOU&A that streamlines GSA's procurement process for NASA of environmentally friendly goods and services.	This MOU&A supports the climate change technology initiative.
Executive Order 13148 "Greening the Government through Environmental Leadership"	Assisted through an interagency committee in drafting an executive order for environmental management to address NASA's issues.	The Executive Order mirrors the NASA environmental strategy to emphasize prevention and system management as a way to achieve environmental compliance.
Executive Order 13149 "Greening the Government through Federal Fleet and Transportation Efficiency"	Assisted through an interagency committee in drafting an executive order for fleet vehicles and transportation to address NASA's issues.	GSA will consult with agencies to ensure progress toward goals for leased fleet management.
Energy Scorecard and Greening the Government Report	Reported results on NASA's energy program in the first annual Energy Scorecard submitted to the Office of Management and Budget.	Achieved a rating of "excellent" by the White House. This recognition was given to only four other agencies.
REGULATORY ASSURANCE		
Environmental Management System (EMS) Procedures Manual	Developed a draft manual for an EMS using ISO 14001 principles.	The EMS manual provides guidance for the consistent management of environmental activities while implementing NASA programs.
Environmental Management System (EMS) Pilot Sites	Implemented EMSs at three sites: Johnson Space Center, Glenn Research Center, Stennis Space Center.	Data collected from these sites will provide information about costs and benefits.
NASA Policy Directive 8500.1	Updated and revised policy document incorporates energy efficiency and references to Environmental Management Board (EMB) and Energy Efficiency Board (EEB).	Policy conforms with the requirements of ISO (International Standards Organization) 9000 and ISO 14000.
Environmental & Energy Spot Checks	Completed Spot Checks of Michoud Assembly Facility, Glenn Research Center, Goddard Space Flight Center, Wallops Flight Facility, Jet Propulsion Laboratory, Goldstone Deep Space Communications Complex.	Problem areas were identified and are currently being corrected.
Environmental Functional Reviews	Completed prototype Functional Review of White Sands Test Facility.	The prototype Review provided information to refine protocols and operational procedures.

Plum Brook Nuclear Reactor Facility Decommissioning and Decontamination	Developed a Decommissioning Plan that is currently under review by the Nuclear Regulatory Agency.	The Plan addresses an Inspector General audit report recommending the decommissioning of the facility.
Jet Propulsion Laboratory Superfund Cleanups	Provided technical advice and support to management of the Jet Propulsion Laboratory concerning the cleanup of soil contamination and groundwater contamination.	Successfully resolved an Inspector General audit that raised issues concerning cost sharing agreement with potentially responsible parties and a perceived conflict of interest.
Public Heath Assessments at Santa Susana Field Laboratory	Negotiated with the Agency for Toxic Substances and Diseases Registry (ASTDR) to conduct a detailed health assessment at Santa Susana Field Laboratory.	This assessment will address the public's concern about releases from rocket testing and a nuclear reactor meltdown.
ENVIRONMENTAL SYSTEMS AND TOOLS		
Top 10 Environmental Priorities	Identified top 10 Agency environmental issues to be addressed in Agency-wide policy, planning, and budgeting.	The identified priorities are being used to allocate limited resources (people and money) so that the priorities can be addressed.
Memorandum of Agreement (MOA) with Navy for Environmental Services	Completed a MOA to obtain environmental services from NAVFAC.	NASA's Jet Propulsion Laboratory, Stennis Space Center, Langley Research Center, and NASA HQ are using the MOA to obtain environmental and contractor support.
Memorandum of Agreement (MOA) on Environmental Geographical Information System	Coordinated a MOA between NASA HQ and Stennis Space Center designating Stennis as the Principal Center for support of NASA Environmental Geographical Information Systems activities.	The MOA improves efficiency and effectiveness through designating a Principal Center that provides coordination and leadership in the area of Geographical Information Systems.
Training Courses: "Introduction to Environmental Management Program" (IEMP)	Created IEMP for program.	The course enhances managers' understanding of compliance with environmental policies and laws.
"Energy Efficiency and Water Conservation" (EEWC)	Created EEWC for energy and facilities.	The course provides managers with knowledge and skill to comply with Federal requirements and goals.
"Environmental Management Board" and "Energy Efficiency Board"	Drafted new charters and established protocol for interdivisional and intra-agency communication and the roles and responsibilities.	Agencywide recognition of the Boards through incorporating the Charters into NASA Procedures and Guidelines (NPG) 1000.1 "The NASA Organization."
2nd Biennial NASA Environmental and Energy Conference	Hosted a conference for NASA environmental and energy professionals, NASA contractors, and representatives of Federal agencies.	The conference was successful for information sharing, professional development, networking, and addressing issues of awareness and customer service.
Environmental Management Reference Manual	Developed a manual to improve internal awareness of environmental responsibilities and access to reference materials.	The manual is useful for making non-environmental professionals aware of NASA's environmental responsibilities and the support available to them through NASA's environmental program.
Environmental Staffing Model	Developed a staffing model that indicated the necessity of civil service and contract support in the area of environmental management.	The model provides useful information about budgeting and full-time equivalent (FTE) allocation in the area of environmental management.
Hazardous Waste Site/Petroleum Site Inventory (or SITES)	Established a database, SITES, to identify and monitor the status of cleanup and associated costs of NASA's hazardous materials sites.	The information in the database was successfully used to update NASA's annual accountability report, or financial audit.
Build, Buy, or Lease Decision Tool for Acquiring Environmental Remediation Technology		
The Environmental Assessment & Management (TEAM) Guide	Negotiated with the U.S. Department of the Army the use of environmental compliance audit protocols for Federal facilities.	NASA will have access to regularly updated protocols for the compliance with Federal and State environmental requirements.

Budget Execution	Developed an Agencywide budget execution plan that includes funds from ROS and Environmental Compliance & Restoration Program.	The use of the budget execution plan has improved meeting environmental management metrics and resulted in improving planning and more efficient use of procurement process.
Memorandum of Agreement (MOA) for Principal Center for National Emission Standards for Hazardous Air Pollutants	Coordinated a MOA between NASA HQ and Marshall Space Flight Center.	Marshall Space Flight Center will provide support to HQ Environmental Management Division in the Clean Air Act regulation review process and will provide expertise and guidance on concerns related to program hardware and supporting facilities.
NPG (NASA Program Guidance) 8570 "Energy Efficiency and Water Conservation Technologies and Practices"	Developed the NPG.	The NPG conforms NASA procedures and guidelines to the new Executive Order 13123. NASA is leading the Federal government in issuing EO 13123 guidance.
NASA Environmental Tracking System (NETS)	Continued development of the Agencywide system.	NETS facilitates and expedites the processing of NASA's environmental and energy reports. This past year we automated the OMB Circular A-11 environmental report, the collection of the Government Performance & Results Act environmental metrics, the automation of environmental funding requests and the energy reports.
Document Management System	Managed the development of an internal document management system.	The system will allow the user to electronically scan and retrieve documents through a Web browser interface.
Customer Satisfaction Survey	Conducted a customer satisfaction survey.	Code JE was among the highest-rated divisions in Code J.
ISO 9000: Office Work Instructions	Created and finalized two Office Work Instructions: (1) Agreement Formulation Process and (2) Environmental Compliance & Restoration Budget Formulation & Execution.	This was required as part of ISO 9000 certification.
Chronological and Action Files	Developed chronological and action files.	This was required as part of ISO 9000 certification.
Response to NASA IG Audit on Agency NEPA Compliance		
Annual Code JE Operating Plan	Developed an annual operating plan defining the work for the next fiscal year.	Code JE work to be performed in Fiscal Year 2001 will be value-added and beneficial to the Agency and our customers.
AGENCY INITIATIVES		
Integrated Asset Management	Supported NASA's development of an Integrated Financial Management Program.	Successfully completed the Integrated Asset Management (IAM) business process reengineering and delivery of a comprehensive functional requirements package and data model.
Environmental Business Case	Developed the business case for the Environmental Module in the Asset Management System. The System is a major component of the Integrated Financial Management Program.	Successfully produced documentation for justify funding and for budgeting of an Agencywide Environmental Management System.

2. NPD 8500.1 NASA Environmental Management

NASA POLICY DIRECTIVE

Directive:	NPD 8500.1
Effective Date:	April 6, 2000
Expiration Date:	April 6, 2005

Responsible Office:	JE / Environmental Management Division
Subject:	NASA Environmental Management

1. POLICY

a. Enable the success of Agency missions, services, and activities, as defined in the NASA Strategic Plan, while maintaining environmental stewardship of assets, controls over environmental responsibilities, and compliance with applicable law. The Administrator's issuance on "Environmental Excellence for the Twenty-First Century" of May 1994 defines NASA's environmental strategy and sets forth a framework for meeting today's environmental needs and preparing for future challenges. The strategy consists of four focus areas: prevention, compliance, restoration, and conservation.

b. Comply with all applicable requirements of Federal law, regulations, and Executive Orders; NASA's self-established requirements and agreements with other agencies, industry, and/or organizations; and with State, local, or territorial environmental laws and regulations properly applicable to Federal entities. Environmental requirements may encompass issues related to environmental management, including, but not necessarilly limited to, hazardous waste management, restoration, remediation of contaminated sites, environmental justice, pollution prevention, water and air management, energy conservation and efficiency management, and protection of cultural and natural resources.

c. In program and project management, as defined in NASA Policy Directive (NPD) 7120.4 and NASA Procedures and Guidelines (NPG) 7120.5, consider environmental factors throughout the life cycle of a program, including planning, development, execution, and disposition activities. Examples of environmental factors include consideration of environmental impacts

as required by the National Environmental Policy Act (NEPA), the proposed use of hazardous materials, the potential for waste generation, the need to acquire necessary permits, waivers and authorizations, and the overall environmental preferability of selected materials and processes.

d. As part of addressing environmental factors, include in the life cycle analysis of costs the potential environmental impacts of programmatic activities and their supporting institutional processes.

e. Foster and actively support environmentally related technology transfer.

f. Actively partner with Federal, State, and local regulatory agencies, as appropriate, to leverage available resources and comply with environmental requirements, prevent pollution, reduce waste generation, and manage natural resources in the most efficient and effective manner possible.

g. Promote continual improvement in carrying out the Agency's environmental management responsibilities.

2. APPLICABILITY

This policy applies to NASA Headquarters and Centers, including Component Facilities, and to the Jet Propulsion Laboratory (JPL) to the extent specified in its contract.

3. AUTHORITY

42 U.S.C. 2473(c)(1), Section 203(c)(1) of the National Aeronautics and Space Act of 1958, as amended.

4. REFERENCES

Applicable Federal Statutes, Executive Orders, and Office of Management and Budget Circulars are listed in Attachment A. Other applicable references appear in Attachment B.

5. RESPONSIBILITY

a. Every NASA employee is responsible for complying with environmental regulations and NASA policy related to official duties.

b. Each NASA organizational element has responsibility for incorporating this environmental policy into planning and budgeting; allocating and maintaining appropriate levels of authority and funding; assuring appropriate training; overseeing environmental process and material selection; minimizing hazardous waste; and stewardship for energy and water usage.

c. The Associate Administrator for Management Systems executes the following activities through the Director of the Environmental Management Division:

(1) Through the Office of Management Systems Functional Leadership Plan, developing and executing the Agency's environmental management strategy and Agencywide environmental policy and guidance.

(2) In cooperation with and support of the Enterprise Institutional Program Officers, advocating, supporting, managing, allocating, and assigning environmental resources as defined and budgeted by the Agency, including applicable financial fiduciary responsibilities.

(3) Advocating and supporting the effective development and execution of environmental and energy conservation and efficiency management training, to include professional development and education initiatives that will promote the knowledge and proficiency of the NASA workforce in environmental and energy conservation and efficiency management requirements, concepts, and techniques.

(4) Serving as Chair for the NASA Environmental Management Board (EMB) and designating a Chair for the NASA Energy Efficiency Board (EEB).

(5) Serving as the NASA senior official for external Agency-level interfaces on domestic environmental matters and supporting the Office of External Relations and the Office of the General Counsel on international environmental matters.

(6) Providing functional oversight and conducting functional assessments to ensure that environmental activities are conducted in accordance with statutory, regulatory, and financial fiduciary requirements. Functional assessment results will be reported to Center Directors and cognizant Institutional Program Officers, and when Agencywide issues, problems, successes, and opportunities are involved, to the EMB.

(7) Providing technical advice, assistance, and consultation to responsible managers based on overall awareness and insight of Agency program execution and national requirements.

(8) Supporting the Occupational Health and Safety Executive Board (OHSEB) in managing the overall NASA Occupational Health Program via the OHSEB Health, Environmental Management, and Safety Subcommittee (HEMSS).

(9) Ensuring the appropriate coordination and approval of Principal Centers to lead or oversee designated environmental initiatives or activities.

(10) Ensuring balance and synergy in addressing environmental management needs across NASA Enterprises.

d. Institutional Program Officers are responsible for the following:

(1) Representing the position of their Enterprise on matters that come before the EMB and the EEB for resolution and serving as a voting member on both Boards.

(2) Ensuring that NASA Centers under their management cognizance have the capability to meet environmental and energy conservation and efficiency management commitments.

(3) Advocating environmental and energy conservation and efficiency management funding requirements and allocating resources for activities conducted within their Enterprise and by Centers under their management cognizance.

(4) Ensuring implementation of environmental and energy conservation and efficiency management policies and EMB/EEB decisions by Centers and facilities under their management cognizance.

e. Center Directors and the Associate Administrator for the Office ofHeadquarters Operations are responsible for the following:

(1) Ensuring that the Center and each Component Facility under their management cognizance have a designated environmental manager with a direct line of authority from the appropriate Center official.

(2) Ensuring that the Center and each Component Facility under their management cognizance have a designated energy manager with a direct line of authority from the appropriate Center official.

(3) Providing sufficient qualified staff and resources required to perform environmental and energy conservation and efficiency management activities.

(4) Ensuring effective development and execution of environmental and energy conservation and efficiency management training, to include professional development and education initiatives, that will promote the knowledge and proficiency of the NASA workforce in environmental and energy conservation and efficiency management concepts and techniques.

(5) Implementing Agency environmental and energy conservation and efficiency functional leadership activities, policies, regulations, procedures, and guidelines.

(6) Reviewing and overseeing all environmental and energy conservation and efficiency management activities.

(7) In collaboration with NASA Headquarters Office of Management Systems, establishing oversight and evaluating Center operations through functional assessments, performance metrics, or other means to ascertain that appropriate environmental compliance and management techniques are used for the identification, documenta-

tion, evaluation, and disposition of all environmental requirements for programs, projects, facilities, systems and operations.

f. Program and project managers are responsible for the following:

(1) Implementing environmental policies and requirements within existing programs and projects including life-cycle planning, development, execution, and disposition activities.

(2) Ensuring that requirements of NEPA are satisfied for any proposed new or modified programs and projects.

(3) Coordinating with the local environmental managers on both existing and new programs and projects to ensure compliance with law and the effective implementation of environmental requirements.

g. Center and Component Facility environmental managers are responsible for the following:

(1) Advocating, managing, and allocating assigned environmental program resources, both for Environmental Compliance and Restoration and Center resources.

(2) Serving as the local source of expertise on environmental policies, procedures, requirements, and processes.

(3) Supporting functional assessments as necessary to ensure that Center programs, projects, facilities, systems, and operations comply with all environmental requirements.

(4) Coordinating with all internal organizations to ensure compliance with the law and effective implementation of environmental policies, procedures, and processes.

(5) Serving on the NASA EMB as a voting member and participating in EMB working group activities as coordinated and approved by local and Headquarters Senior Management.

(6) Reporting information regarding environmental management activities to the Associate Administrator for Management Systems or designee.

h. Center and Component Facility energy managers are responsible for the following:

(1) Serving as the local source of expertise on energy conservation and efficiency management policies, procedures, requirements, and processes.

(2) Conducting annual self-assessments on energy conservation and efficiency management. Self-assessment results will be reported to the Center Director, the cognizant Institutional Program Officer, and the Associate Administrator for Management Systems. Self-assessment results will be reported to the EEB when Agencywide issues, problems, successes, and opportunities are involved.

(3) Coordinating with all internal organizations to ensure compliance with the law and effective implementation of energy conservation and efficiency management policies, procedures, and guidelines.

(4) Serving on the EEB as a voting member and participating in EEB working group activities as coordinated and approved by local and Headquarters Senior Management.

(5) Collecting and providing input to mandatory Agency energy conservation and efficiency management plans, reports, and budget exhibits.

(6) Reporting information regarding energy conservation and efficiency management activities to the Associate Administrator for Management Systems or designee.

6. DELEGATION OF AUTHORITY

None.

7. MEASUREMENTS

The majority of environmental and energy regulations include specific requirements to assess compliance. These requirements are monitored by external regulatory agencies to ensure compliance with requirements of the relevant laws. NASA's internal metrics for environmental management cover prevention, compliance, restoration, and conservation measures detailed in the Environmental Management Division's Annual Operating Plan and summarized in the Office of Management Systems Functional Leadership Plan. NPD 8800.16 dated September 6, 1995.

8. CANCELLATION

NPD 8800.16 dated September 6, 1995.

/s/ Daniel S. Goldin
Administrator

ATTACHMENT A: APPLICABLE FEDERAL STATUTES, EXECUTIVE ORDERS, AND OFFICE OF MANAGEMENT AND BUDGET CIRCULARS FEDERAL STATUTES

01. Abandoned Shipwreck Act (43 U.S.C. 2101 et seq.).
02. American Indian Religious Freedom Act (42 U.S.C. 1996 et seq.).
03. Antiquities Act of 1906 (16 U.S.C. 431 et seq.).
04. Archeological and Historic Preservation Act (16 U.S.C.469-469c).
05. Archeological Resources Protection Act (16 U.S.C. 470aa-mm).
06. Bald Eagle Protection Act (16 U.S.C. 668-668d).
07. Clean Air Act (42 U.S.C. 7401 et seq.).
08. Clean Water Act (33 U.S.C. 1251 et seq.).
09. Coastal Barrier Resources Act (16 U.S.C. 3501 et seq.).
10. Coastal Zone Management Act of 1972 (16 U.S.C. 1451 et seq.).
11. Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. 9601 et seq.).
12. Emergency Planning and Community Right-To-Know Act (42 U.S.C. 11001 et seq.).
13. Endangered Species Act (16 U.S.C. 1531 et seq.).
14. Energy Policy and Conservation Act (42 U.S.C. 6201 et seq.).
15. Energy Policy Act of 1992 (Public Law 102-486, 106 Stat. 2776).
16. Farmland Protection Policy Act (7 U.S.C. 4201 et seq.).
17. Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. 136 et seq.).
18. Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.).
19. Historic Sites Act of 1935 (16 U.S.C. 461 et seq.).
20. Marine Mammal Protection Act (16 U.S.C. 1361 et seq.).
21. Migratory Bird Treaty Act (16 U.S.C. 703 et seq.).

22. National Energy Conservation Policy Act (42 U.S.C. 8251 et seq.).
23. National Environmental Policy Act (42 U.S.C. 4321 et seq.).
24. National Historic Preservation Act (16 U.S.C. 470 et seq.).
25. Native American Graves Protection and Repatriation Act (25 U.S.C. 3001-3013).
26. Pollution Prevention Act of 1990 (42 U.S.C. 13101 et seq.).
27. Rivers and Harbors Act (33 U.S.C. 401 et seq.).
28. Safe Drinking Water Act (42 U.S.C. 300f et seq.).
29. Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (42 U.S.C. 6901 et seq.).
30. Toxic Substances Control Act (15 U.S.C. 2601 et seq.).
31. Wild and Scenic Rivers Act (16 U.S.C. 1271 et seq.).
32. Wilderness Act (16 U.S.C. 1131 et seq.).

EXECUTIVE ORDERS

01. Executive Order 11514 (Amended by Executive Order 11991): Protection and Enhancement of Environmental Quality.
02. Executive Order 11593: Protection and Enhancement of the Cultural Environment.
03. Executive Order 11912: Delegation of Authorities Relating to Energy Policy and Conservation.
04. Executive Order 11988: Floodplain Management.
05. Executive Order 11990: Protection of Wetlands.
06. Executive Order 12003: Relating to Energy Policy and Conservation.
07. Executive Order 12088 (Amended by Executive Order 12580): Federal Compliance With Pollution Control Measures.
08. Executive Order 12114: Environmental Effects Abroad of Major Federal Actions.
09. Executive Order 12372: Intergovernmental Review of Federal Programs.
10. Executive Order 12843: Procurement Requirements and Policies for Federal Agencies for Ozone-Depleting Substances.
11. Executive Order 12856: Federal Compliance with Right-To-Know Laws and Pollution Prevention Requirements.
12. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.
13. Executive Order 13006: Locating Federal Facilities on Historic Properties in Our Nation's Central Cities.
14. Executive Order 13007: Indian Sacred Sites.
15. Executive Order 13031: Federal Alternative Fueled Vehicle Leadership.
16. Executive Order 13061: Federal Support of Community Efforts Along American Heritage Rivers.
17. Executive Order 13089: Coral Reef Protection.
18. Executive Order 13101: Greening the Government Through Waste Prevention, Recycling and Federal Acquisition.
19. Executive Order 13123: Greening the Government Through Efficient Energy Management.

OFFICE OF MANAGEMENT AND BUDGET (OMB) CIRCULARS

01. OMB Circular A-11: Preparation and Submission of Budget Estimates.
02. OMB Circular A-106: Reporting Requirements in Connection with the Prevention, Control, and Abatement of Environmental Pollution at Existing Federal Facilities.
03. OMB Circular A-119: Federal Participation in the Development and Use of Voluntary Standards.

ATTACHMENT A: APPLICABLE REFERENCES

01. NPD 1000.1, NASA Strategic Plan
02. NPG 1000.2, NASA Strategic Management System
03. NPG 1000.3x, The NASA Organization
04. NPD 1440.6, NASA Records Management
05. NPG 1441.1, NASA Records Retention Schedules
06. NPD 1800.2, NASA Occupational Health Program
07. NPD 7120.4, Program/Project Management
08. NPG 7120.5, Program and Project Management Processes and Requirements
09. NPD 8700.1, NASA Policy for Safety and Mission Success
10. NPD 8710.1, Emergency Preparedness Program Policy
11. NPD 8800.14, Policy for Real Property Management
12. NPG 8800.17, Energy Metrics for NASA Facilities
13. NPD 8820.1, Design and Construction of Facilities
14. NPG 8820.3, Pollution Prevention
15. NPG 8830.1, Affirmative Procurement Plan for Environmentally Preferable Products
16. NPD 8831.1, Management of Facilities Maintenance
17. NPG 8831.2, Facilities Maintenance and Energy Management Handbook
18. NPG 8840.x, NASA Procedures and Guidelines for Implementation of the National Environmental Policy Act, and Executive Order 12114
19. NPG 8850.1, Environmental Investigation and Remediation - Potentially Responsible Party Identification and Analysis
20. NASA Environmental Excellence for the Twenty-First Century, dated May 1994(NASA Administrator's Statement)
21. NASA Environmental Justice Strategy, dated March 1995
22. Office of Management Systems Functional Office Implementation Plan: Implementing NASA's Strategies for the 21st Century, dtd May 1998

http://nodis.hq.nasa.gov/Nodis1.1/attachments/NPD_8800_16_Graphic.doc

3. Environmental Excellence for the Twenty-First Century

Environmental Excellence is not a program, nor can it be achieved through a policy statement. Environmental excellence is a way of life and must be ingrained as part of our culture. This strategic plan is an important first step to building global stewardship into everything NASA does. Whether it is designing and fabricating robotic spacecraft, launching the Space Shuttle, or conducting basic research, we must seek solutions which are environmentally benign. NASA must be a leader in reducing the use of ozone-depleting substances and continue to identify program and process revisions to reduce any possible adverse environmental impacts.

Our Agencywide impact on the global environment must be able to withstand the scrutiny of the international community. No one person can do this alone; but working together, the entire NASA community—civil service and contractor alike—can make the vision a reality.

Administrator

Prologue

Environmental Excellence for the Twenty-First Century defines the commitment of the Agency's leadership and sets forth a framework for meeting today's environmental needs and preparing for future challenges. It does not limit flexibility to meet environmental challenges; rather, it provides a philosophical context by which all efforts can be guided. The strategy provides for a unity of purpose, direction, and fosters an environmental ethic of leadership and national resource stewardship in everyone associated with NASA. Environmental excellence requires a strong environmental ethic throughout the entire NASA community.

This strategy takes its direction from a clear vision of the future. The strategy is expanded into four focus areas—prevention, compliance, restoration, and conservation. These focus areas are further defined by a group of objectives which will form the basis of implementation plans. This multilevel approach is essential since future goals can only be achieved by passing the present-day tests of fiscal and scientific reality.

Working on the immediate priority of bringing all NASA activities into compliance with current environmental requirements, while simultaneously restoring previously contaminated sites as quickly as funds allow, is a key part of the overall plan. Conservation and pollution prevention shall be considered in all new projects and programs to minimize environmental impacts and preserve our natural and cultural resources. NASA will actively seek partnership arrangements with Federal and State agencies, academic institutions, industry, and other nations to leverage our efforts and share our knowledge to the benefit of all mankind.

Vision

NASA will Continue as a World Leader in Space Exploration and Aeronautics While Maintaining Environmental Excellence

NASA's environmental vision statement serves as a cornerstone on which this Agency will build its future. While the Agency's science and research missions are primary, they should not be pursued at the expense of the environment. The vision conveys our commitment to being an exemplary steward of the environment while continuing to be the preeminent organization in space exploration and aeronautics research and development. Excellence is measured, in part, by other organizations using NASA as a benchmark to judge their own success.

NASA's Environmental Strategy

NASA's environmental strategy provides the framework and guidance necessary to attain our environmental vision. This strategy consists of focus areas, goals, and objectives, all leading to implementation plans. The strategy is supported by NASA's ability to identify and fully use existing Centers of excellence within the Agency. The implementation plan allows the strategy to be readily translated into cohesive activities and takes into account resource realities and priorities.

The full spectrum of environmental needs can be expressed in four principal areas—prevention, compliance, restoration, and conservation. These focus areas, when viewed in the simplest of terms, can be expressed as minimizing future problems through an active pollution-prevention program; bringing all operations into compliance with current environmental requirements; cleaning up all problems resulting from past operations; and preserving our rich natural and cultural heritage for future generations. Woven throughout the fabric of the plan are crosscutting issues of awareness, community outreach, and resource advocacy. Attainment of that vision depends on the support of the entire NASA family and dedication of the resources required to execute the plan.

Prevention

Implement an Integrated Management Approach to Minimize Environmental Contamination and Pollution

This area focuses on using a holistic approach to pollution prevention to instill an environmental ethic that will avoid future compliance and restoration problems. This requires strengthening the National Environmental Policy Act planning process, modifying industrial processes, and developing substitute materials. Since there may be slightly higher initial costs, final decisions will be based on the project life-cycle costs, while seeking the most environmentally benign solution.

Goal 1: Incorporate Pollution-Prevention Considerations in All Agency Decisions

Objectives

- Consider life-cycle costs and pollution prevention in Agency decisions including research and development, facility construction, and operations as part of the Program and Project Management review cycle
- Establish and develop environmental partnerships with public and private groups to promote sharing of technical resources and enhance commitments
- Promote and expand the use of NASA's environmental monitoring systems technology in all aspects of environmental decisionmaking

Goal 2: Develop Visibility for Implementing Pollution Prevention

Objectives

- Instill a pollution-prevention ethic throughout the NASA team through an aggressive awareness program
- Systematically reduce or eliminate the use of hazardous materials and operations or processes that produce hazardous/solid waste and other emissions, both by NASA and its contractors and suppliers
- Establish pollution-prevention partnerships with Federal and State agencies, academic institutions, industry, and the public
- Pursue new technologies, using environmentally benign substances and processes, and transfer this technology to industry

Compliance

Ensure that All Operations Meet and Maintain Compliance with Environmental Laws and Regulations

This focus area addresses all activities, ensuring that NASA's current and future operations meet all Federal, State, or local environmental regulations. Compliance will be the highest priority item in the entire NASA environmental strategy. Since total compliance is a fast-moving target, we will be proactive in monitoring changing requirements. We will strive to be in compliance with all new requirements in advance of the regulatory date to further demonstrate our commitment to the environment.

Goal 1: Bring All Current Operations into Compliance

Objectives

- Identify all areas not currently in compliance, and develop a tracking system for all known compliance issues, notices of violations, or any long-standing problems
- Build and adequately staff, at the Center level, a high quality, multidisciplined organization to manage and execute the compliance attainment program
- Establish a priority system to insure timely funding and correction of all compliance actions

Goal 2: Enhance Management Visibility

Objectives

- Identify management indicators that accurately measure the impact of pollution control and other compliance activities in achieving environmental results
- Provide clear, concise policy direction for implementing the environmental program
- Develop a comprehensive management information system to identify the cost of compliance and the appropriate fund source and ensure adequate multi-year budget coverage
- Identify, promote, quantify, and gain support for validated environmental funding and personnel requirements
- Provide continuing environmental awareness training for all members of the NASA team

Goal 3: Develop and Implement a Compliance Monitoring Program

Objectives

- Conduct comprehensive in-house compliance assessments
- Establish contractor environmental performance, which will be an evaluation factor in all major contract decisions
- Solicit assistance from the Environmental Protection Agency and other regulatory bodies to resolve long-standing problems
- Closely monitor pending environmental regulations to permit advance planning which would enable a proactive program to maintain compliance

Restoration

Clean Up Contaminated Sites

This focus area stresses cleaning up all contaminated sites as rapidly as possible to protect human health and the environment. Fund availability and technical limitations require that this effort be carried out in prioritized sequence. The priority system must be clear and easily understood to permit NASA managers to make funding decisions and communicate the basis for decisions on which sites to clean up first. The Agency will actively seek public involvement in the decisionmaking process.

Goal 1: Clean Up Contaminated Sites as Rapidly as Funds Permit

Objectives

- Identify and prioritize all sites
- Initiate removal actions to prevent the spread of contamination
- Allocate resources based on human health and environmental risks
- Aggressively identify, justify, and defend resource requirements
- Seek and employ innovative cleanup strategies, including technology, contracting, and project management approaches

Goal 2: Establish and Maintain a Positive Reputation with the Regulators and the Public

Objectives

- Negotiate and sign Federal Facility Agreements and consent agreements with EPA and States for contaminated sites
- Work closely with all regulators and jointly seek solutions to environmental cleanup issues
- Utilize community awareness and outreach programs and involve local communities in restoration process, decisions, and activities

Conservation

Protect and Enhance Natural and Cultural Resources

Conservation is the essence of good stewardship for all the resources NASA controls. It extends to careful land-use planning, enhancing existing natural resources, and preserving those cultural resources associated with significant aspects of our historic and prehistoric heritage. Conservation reduces the impact of our activities on the environment, especially through programs such as recycling and energy conservation.

Goal 1: Assess and Protect Natural Resources

Objectives

- Obtain natural and cultural resources baseline data
- Establish an innovative funding strategy for natural resource programs
- Incorporate natural and cultural resource considerations and constraints into land-use planning decisions
- Establish partnerships with Federal and State agencies, academic institutions, industry, special action groups, and the general public to manage cultural and natural resources and make them available to the largest possible community

Goal 2: Enhance Recycling and Energy Conservation Programs

Objectives

- Use recycled materials whenever such materials are available, including those used by contractors and suppliers
- Conduct an aggressive, continuing awareness program to build an understanding of the opportunities for and benefits of recycling
- Seek to stimulate industry to develop recycling and other environmentally associated technologies by encouraging business opportunities
- Reduce energy usage to meet or exceed legislated goals

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http://www.hq.nasa.gov/office/codej/codeje/codeje.html

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